

**REMARKS**

Claims 1 – 17 are pending in the current matter. Claims 1 – 17 are cancelled, without prejudice. Claims 18-20 are re-presented, as they were previously presented, but not entered in the last amendment. The office action issued by the Examiner and the citations referred to in the office action have been carefully considered.

**CLAIMS 1 - 17 STAND REJECTED AS OBVIOUS OVER THE WEGIL REFERENCE (United States Letters Patent Number 6,136,272) and have been replaced by new claims.**

The Examiner has rejected all of the claims as obvious over the Wegil reference, disclosed to the Office as part of an Information Disclosure Statement from the International Search Report. Since the standards for obviousness require that the U.S. Patent and Trademark Office set forth a *prima facie* case of obviousness, reconsideration of this rejection, for the reasons set forth below, *inter alia*, is hereby respectfully proposed to be in order. Such relief is likewise hereby earnestly solicited.

The Examiner asserts that applicant's invention is obvious, yet fails to set forth a *prima facie* case of obviousness. As the PTO has the burden to do so, the rejection must be reconsidered. In re Dillon (citation omitted).

In accordance with applicant's novel method as claimed, the resulting interdiffusion passage with laminar shear is itself unexpected, this is because boundary layers are formed against both surfaces, and it is respectfully submitted, not merely a design choice. It is certainly not obvious to take the device for joining fluid layers of the Wegil reference and use it for applicant's purpose, to achieve applicant's results.

To beg the question and assert that "optimizing flow interactions" and "modifying radial surfaces so that the inter-diffusion rate is optimized" constitute obvious mechanical design choices circumvents the legal requirement for the PTO to set forth a *prima facie* case of

obviousness, and would “be a disruption of the settled expectations of the inventing community.” Festo v. Shoketsu Kinzoku Kogyo Kabushiki, 535 U.S. 722, 739 (2002).

The Examiner cites In re Dailey, and In re Rose (both of which contained multiple primary and secondary references) to suggest that optimizing by obtaining a linear relationship between viscosity and angular velocity and then eliminating Taylor vortices for better mixing as clearly accomplished by applicant is obvious. Not only is this factually inaccurate, the legal test makes it clear that this is not the standard, and the Examiner seems to imply that achieving the unexpected results would be desired, yet the reference cited did not achieve them, suggest how to get this, or motivate artisans to know how to do so. The PTO must rebut secondary considerations, not make a conclusion that they are not inventive. Stratoflex v. Aeroquip 713 F.2d 1530 (Fed. Cir. 1983).

It is respectfully proposed that one skilled in the art would recognize that high-shear mixing without macroscopic convection effects, or Taylor vortices is not obvious, rather doing so without relatively moving surfaces (as in the cited reference) is part of the instant invention, as opposed to being obvious because it is clearly beneficial. It is therefore respectfully submitted, that one skilled would recognize applicant’s implementing the present invention as evidence of its non-obviousness, under Environmental Designs v. Union Oil Co., 713 F.2d 693 (Fed. Cir. 1983), *cert-denied*, 464 U.S. 1043 (1984).

The present invention should be allowed because others have not succeeded at what is claimed, and while they may understand the benefits of doing so, it is inventive. Kegal v. AMF Bowling, 127 F.3d 1420, 1430 (Fed. Cir. 1997). Likewise, optimizing to solve a long-felt need does not only not involve routine skill, it must be rebutted by the PTO, therefore allowance of the instant claims is required under law. Sensonic v. Aerosonic, 81 F.3d 1566 (Fed. Cir. 1996).

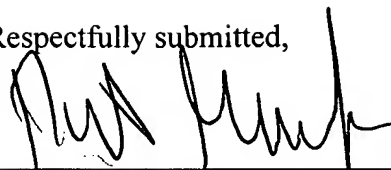
It is respectfully submitted that all of the Examiner’s objections have been successfully traversed and that the application is now in order for allowance. Accordingly, reconsideration of the application and allowance thereof is courteously solicited.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Peter J. Gluck', written over a horizontal line.

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